

Sweating Sickness: In a Nutshell

Claire Ridgway

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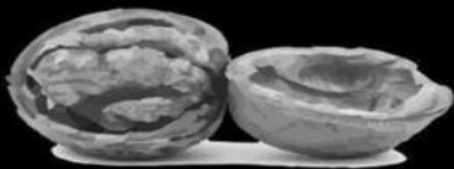
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Sweating Sickness

in a nutshell



History
"In a Nutshell"
Series



CLAIRE RIDGWAY

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Introduction

Sweating sickness first reared its ugly head in England in summer 1485 and there were four further outbreaks - in 1508, 1517, 1528 and 1551 - before it completely disappeared, never to be seen in that land again.

It seems to have been a highly contagious disease that decimated settlements around England, sometimes taking thousands of lives. According to John Caius, the famous sixteenth century English physician, towns thought themselves lucky if half the population survived. Although studies have since suggested that it was nowhere near as lethal as the plague, sweating sickness caused shock and horror because it was a brand new disease and it killed quickly. It was referred to by many different names, including the Sweat, the Sudor Anglicus or English Sweat, the Swat, Stup-Gallant, Stoupe Knave and know thy Master, Sweating Sickness and the New Acquaintance.

Although some experts believe it was carried to England by French mercenaries in Henry Tudor's army in 1485, the civic records of York record a disease with the same symptoms as sweating sickness affecting the city in June 1485, two months before army landed at Milford Haven on the Pembrokeshire coast.¹ There are also no records of the disease affecting Henry's army or the Welsh population it had contact with during its march through Wales to Leicestershire. The disease was obviously known in England before the Battle of Bosworth because, according to the Croyland Chronicle, when Richard III called on Thomas Stanley to travel from his home in Lancashire to Nottingham, after news of Henry Tudor's landing had broken, Stanley "made an excuse that he was suffering from an attack of the sweating sickness, and could not possibly come".² It appears, therefore, that Henry Tudor and his forces cannot be blamed for its introduction.

John Caius wrote of conjecture that the disease was not entirely new, that it: "hath bene before seene among the Grekes in the siege of Troie. In the emperor Octavius warres at Cantabria, called nowe Biscaie, in Hispaine: and in the Turkes, at the Rhodes," but this could not be confirmed.³



John Caius (1510-1573)

Engraving from 1838. English physician and second founder of the Gonville and Caius College, Cambridge. Engraved by Eggleton and published in London by Fisher, Son & Co.

¹ *York Civic Records*. Vol.1, ed. Angelo Raine, Yorkshire Archaeological Society, 1939.

² *The Croyland Chronicle: Part IX, The Third Continuation of the History of Croyland Abbey: July, 1485 – April, 1486 with Notes*, <http://www.r3.org/on-line-library-text-essays/crowland-chronicle/>

³ *A boke or counseill against the disease commonly called the sweate or sweatyng sicknesse*, John Caius, 1552

Symptoms

The people of England were already well acquainted with diseases like the plague, malaria, dysentery and typhoid fever, but sweating sickness was something new and contemporaries described it as such. It was also distinguishable from the influenza outbreaks that had affected England in the early fifteenth century and the pandemic that affected Europe in 1510 and was characterised by a “cough, fever, and a sensation of constriction of the heart and lungs”.⁴

Thomas Forrestier, a French physician living in London, wrote a treatise on the disease, within which he described its main symptoms. These included:

- “a great sweating and stinking”
- redness of the face and body
- a continual thirst
- fever
- headache
- breathlessness⁵

John Caius added:

- pain in the back, shoulder and extremities, accompanied by a “flusshing” – i.e. muscle pain (myalgia) and redness
- “grief” in the liver and stomach, i.e. abdominal pain
- headache and “madnes”, or delirium
- “passion of the hart” – i.e. cardiac palpitations
- “a marueilous heauinesse and a desire to sleape”.⁶

Caius also commented that he would have named the disease “Ephemera of Englande”, an ephemera being “a feuer of one natural dai”, rather than simply “sweating sickness”, because this disease only affected people for up to twenty-four hours and was “no sweat only” but a fever.

Chronicler John Harding recorded people throwing off their bedclothes and running through the streets of London seeking relief from their fevers.

Polydore Vergil, the famous Italian humanist scholar, described sweating sickness in his history of England, *Anglica Historica*:

A sudden deadly sweating attacked the body, and at the same time head and stomach were in pain from the violence of the fever. When seized by the disease, some were unable to bear the heat and (if in bed) removed their bedclothes, or (if clothed) undressed themselves; others slaked their thirst with cold drinks, yet others endured the heat and the stench (for the perspiration stank foully) and by adding more bedclothes provoked more sweating. But all alike died, either as soon as the fever began or not long after, so that of all the persons infected, barely one in a hundred escaped death. And those who survived twenty-four hours after the sweating ended, for this was the period when the fever raged, were not free of it, since they continually relapsed and many perished thereafter.⁷

What was so shocking about sweating sickness, was the speed it could kill people. Forrestier recorded people dropping dead while walking down the street or playing with their children:

We saw two prestys standing together and speaking together, and saw both of them dye sodenly. Also in die proxima we se the wyf of a taylour and sodenly dyed. Another yonge man walking by the street fell down sodenly. Also another gentylman ryding out of the cyte [21 September 1485] dyed. Also many others the which were to rehearse we have known that have dyed sodenly [...] But that immediatly killed some in opening their windowes, some in plaieng with children in their strete dores, some in one hour, many in two it destroyed, & at the longest, to the that merilye dined, it gaue a sorowful Supper. As it founde them so it toke them, some in sleape some in wake, some in mirthe some in care, some fasting & some ful, some busy and some idle [...]

Chronicler Edward Hall wrote of it killing some people within two to three hours. And during the 1517 epidemic the Venetian ambassador recorded:

This disease makes very quick progress proving fatal in 24 hours at the furthest and many are carried off in 4 or 5 hours. The patients experience nothing but a profuse sweat, which dissolves the frame, and when once the 24 hours are passed all dangers are at an end.

Both Vergil and Hall comment on the danger having passed once a patient lived to the twenty-four hour mark.



Danse macabre by Michael Wolgemut

Liber chronicarum hartmann schedel,

(German printed edition), folio CCLXI recto from Hartman Schedel's
Chronicle of the World (Nuremberg, 1493)

⁴ *Pandemic Influenza's 500th Anniversary*, David M. Morens et al., *Clinical Infectious Diseases* (Oxford Journals), Volume 51, Issue 12, 2010, pp. 1442-1444

⁵ *Tractatus contra pestilentiam thenasmonem et dissinteriam*, Thomas Forestier, Rouen 1490, quoted in *The English Sweating Sickness (Sudor Anglicus): A Reappraisal*, John A. H. Wylie and Leslie H. Collier, *J Hist Med Allied Sci* (1981) XXXVI (4)

⁶ *A boke, or counseill, against the disease commonly called the sweate or sweating sicknesse*, John Caius, 1552

⁷ *Anglica Historica, 1485-1537*, Polydore Vergil, ed. Denys Hay, [Camden Society, XLIV] (London, 1950), 7-9, quoted in *Population, plague and the sweating sickness: demographic movements in late fifteenth century England*, R.S. Gottfried, *J. Brit. Stud.*, 1977, p19.

Who was affected?

While diseases like the plague preyed on the poor, records show that sweating sickness affected mainly the upper classes, particularly rich young men. Young children and the elderly, who are usually vulnerable to disease, tended to be spared. It appears to have affected mainly rural areas, but London, the student communities of Oxford and Cambridge, and monastic communities were badly hit. Chronicler John Hoker noted that “this mortalitie fell chieflie or rather upon men, and those of the best age as between thirtie and fortie years [...]”, and John Caius wrote that it affected “such persons so notably noble in birthe, goodly conditions, graue sobrietie, singular wisdom, and great learnynge.” It was an unusual disease.

One of its names, the English Sweat, came from the fact that it initially only affected England and the English population of Calais, which was an English territory at that time. The disease did not spread into Ireland, Scotland or Wales, and when foreigners residing in England were affected they got it mildly and recovered.



All Souls College, Oxford University

©istock photo, Anna Bradley

The epidemics

All five sweating sickness epidemics hit England in the summer or early autumn, with the peak usually being in August, and the disease dying out in September.

1485

There is controversy over where and when this first epidemic of the sweating sickness started, but it had spread to London by September 1485. Thomas Forestier wrote that it arrived in London on 19 September, but a London chronicler dates its arrival to 27 September.⁸ The chronicler went on to explain how the disease killed Thomas Hyll, the lord mayor, and then his replacement, Sir William Stokker, as well as a number of aldermen and “many worshipful commoners”. Thomas Forestier recorded that 15,000 people died in London alone. But it has been pointed out that this must be an exaggeration because that would be a third of the city’s population at that time.

According to the Croyland Chronicle, sweating sickness “made great ravages” and killed “many members of the highest rank and most wealthy classes in other parts of the kingdom”. R S Gottfried notes that a Paston letter mentioned a “sykness” affecting the population of rural Norfolk on 23 September, although this may well have been the plague, and the Croyland Chronicle recorded it reaching Croyland Abbey, in the fens of Lincolnshire (not far from Norfolk), by 14 October 1485 when Abbot Lambert Fossedyke died of the disease within eighteen hours of catching it.

Gottfried writes of how it had also spread to the midlands and southern and western counties of England by October.⁹ John Wylie and Leslie Collier wrote that archidiaconal court records show that it was present in St Albans in Hertfordshire, just north of London, and noted the deaths of Abbess Comaland of the Abbey of St Editha of Wilton in Wiltshire, Abbot John Shepished of St Mary de Pratis in Leicester and Richard Coldwiche, clerk of holy orders of the Hospital of St John the Baptist in Stafford, all in September 1485.¹⁰

1508

The next recorded outbreak of sweating sickness was twenty-three years later, in 1508, although some suggest that it may have caused the death of Arthur, Prince of Wales, eldest son of Henry VII, in 1502. There was also an outbreak of an unknown disease in Chester in 1507, which killed ninety-one people in three days, only four of whom were women.¹¹

Thomas More wrote to Cardinal Wolsey in 1508 to draw his attention “to the severe depredations of the sweating sickness among

the young gentlemen of Oxford and Cambridge”,¹² and Bernard André’s *Annals* record the disease killing members of the household of the lord treasurer in July, public prayers being said at St Paul’s in August, and the king’s servants were struck down by the disease in Wanstead, Greenwich and Eltham. Henry VII’s lord chamberlain and lord privy seal both survived it, but young Lord Graystock and Dr Symeon, Dean of the Chapel Royal, died.¹³

1517

The third outbreak of sweating sickness hit England in 1517 and was recorded by chronicler Edward Hall:

[...] sudainly there came a plague of sickness called the Swetying Sickness that turned all his [the King’s] purpose. This malady was so cruell that it killed some within three houres. Some within two houres, some merry at dinner and dedde at supper. Many died in the Kynges courte, the lorde Clinton, the lorde Gray of Wilton, and many Knightes, gentelmen and officers. For this plague Mighelmas Terme was adiornd [...]¹⁴

Sebastian Giustinian, the Venetian ambassador, reported on 6 August 1517: “The King had removed with only a few attendants to a distant and unusual residence, in consequence of this new malady (the sweating sickness).” He commented that “few strangers are dead but an immense number of natives”, and reported that his own secretary had come down with the disease but had recovered. Giustinian went on to write of how many of Cardinal Wolsey’s household had died and that the cardinal and the Bishop of Winchester were ill, although they both recovered.¹⁵ It was also reported that members of the royal court, including the queen’s steward, Mr Morgan, and Matthew Jones of the king’s wardrobe, perished, and Andrea Ammonio, Henry VIII’s Latin secretary and a friend of Erasmus, died. On 12 August Giustinian reported that he and his son had been ill with sweating sickness and that “Cardinal Wolsey had likewise suffered the disease three times in a few days”.¹⁶ By 27 August, Cardinal Wolsey had suffered a further relapse.¹⁷

Francesco Chierigato, papal nuncio to England, also gave an account of the disease on 6 August 1517, writing that in Oxford “upwards of 400 students had died in less than a week” and “such was the universal dread of the disease, that very few were those who did not fear for their lives, whilst some were so terrified by it that they suffered more from fear than others did from the sweat itself”.¹⁸ Thomas More wrote to Erasmus, saying: “Multitudes are dying around us. Almost everyone in Oxford, Cambridge and London has been ill lately.”¹⁹

1528

The next outbreak of sweating sickness was in 1528. This time the disease spread across the English Channel, but only troubled the English population of Calais. It affected the English Court in London in May 1528, causing the court to be broken up and the king and queen to flee to Waltham Abbey.

This epidemic hit the English clergy hard. There was an outbreak at a convent in Wilton in July 1528, an outbreak in Lincolnshire that killed four priests and two “lay brethren”, and an outbreak at the Charterhouse in London that caused many deaths. Cardinal Wolsey’s household was once more affected by the disease, although the cardinal escaped infection, and we know from the reports of the French Ambassador, Jean du Bellay, that by 18 June some 2,000 people in London alone were afflicted and that this had risen to 40,000 by 30 June, although only 2,000 died.²⁰ On 21 July, du Bellay reported that the disease had diminished in London but was still “very great” in Kent. He went on to write about how he had “sweated” at the Archbishop of Canterbury’s house in Lambeth and while he was ill eighteen members of the archbishop’s household died in only four hours. He estimated that “100,000 wills have been made off-hand”, keeping the notaries busy.²¹ On 10 July, Cuthbert Tunstall, Bishop of London, wrote to Cardinal Wolsey explaining that he dared not visit Wolsey because “nearly all his servants are troubled with the sweat”. And on St Thomas’s Day (3 July), thirteen went down with the disease on the same day.²²

Henry VIII managed to avoid the disease and his sweetheart, Anne Boleyn, survived it, but William Compton, Francis Poyntz and William Carey, all members of the king’s privy chamber, died and other prominent members of court, including the Marquis and Marchioness of Dorset, Sir Thomas Cheyney, Henry Norris, Sir John Wallop, George Boleyn and Thomas Boleyn also came down with it but survived. On 30 June, Du Bellay recorded that all but one of the king’s privy chamber had been afflicted. The Marchioness of Exeter was recorded as being taken ill on 9 July.

According to Sir Robert Wingfield, Lord Deputy of Calais, sweating sickness had arrived in Calais by 10 July and had “attacked many”, although only two died: “a gentleman of Lancashire, named Syngilton, [...] the other a fisherman.”²³

Some records suggest that this epidemic also moved to Hamburg, via an English ship, where it killed 1,000 people in less than twenty-four hours. It then spread along the Baltic into Scandinavia and south, further into Germany and Austria. One expert points out that in Vienna, which was under siege by the Turks at the time, it only affected local people. The Turks were spared.²⁴

Twenty-three years later the disease struck again and this is the epidemic that the famous, contemporary, English physician, John Caius, recorded in his *A booke, or counsell, against the disease commonly called the sweate or sweating sicknesse* in 1552.

Caius wrote of how the disease began in the middle of April in Shrewsbury and spread to Ludlow and the Welsh Marches, Coventry, Oxford and then to the south and south-west. It spread to London on 7 July and killed over 700 people between 9 and 16 July, not counting the deaths on 7 and 8 July when no register was kept. By 30 July, a further 142 people had died. It then disappeared in London and moved to eastern and northern counties before slowing in August and finally dying out at the end of September. In Loughborough, Leicestershire, it killed nineteen people in six days and in Oxford it attacked sixty in just one night. Prominent court members who died included Sir Thomas Speke of the king's council and diplomat Sir John Wallop, who had fought it off successfully in 1528. The Duchess of Suffolk's young sons, Henry and Charles Brandon, also died.

Caius wrote of how people tried to escape the disease by fleeing to Ireland, Scotland and France, but that it followed English people "like a shadow". While it spared the natives of those countries, it still affected the English people who had fled.

It was never heard of again in England after the 1551 epidemic, but a similar disease was reported in Leipzig in 1652, various parts of France in 1818, 1821 and 1845, Northern Spain in 1835, Northern Italy in 1849 and Holland in 1850.

8 *Tractatus contra pestilentiam thenasmonem et dissinteriam*, Thomas Forestier, Rouen 1490. Forestier wrote "Cuius febris adventus incepit sua vexilla extendere in anglia in civitate londoniarum decimanona die mensis septembris anno dominae 1484", which roughly translates to "[...] fevers whose arrival begins to extend his troupes in the City of London in England (on the) 19th day of the month of September in the year of our Lord 1484." 1484 has been written over the date in the BNF collection's version of *Tractatus* and it must, in fact, be 1485.

Chronicles of London, ed. Charles Lethbridge Kingsford, Oxford 1905, p193

9 *Population, plague and the sweating sickness: demographic movements in late fifteenth century England*, R.S. Gottfried, *J. Brit. Stud.*, 1977, p18.

10 *The English Sweating Sickness (Sudor Anglicus): A Reappraisal*, John A. H. Wylie and Leslie H. Collier, *J Hist Med Allied Sci* (1981) XXXVI (4), p429.

11 *History of the city of Chester, from its foundation to the present time*, Vol. I, Joseph Hemingway, Chester 1831, p142

12 Wylie and Collier, p430.

13 *Annals of Henry VII*, Bernard André discussed in *A History of Epidemics In Britain*, Volume I, Charles Creighton. Cambridge University Press, 1891

14 *Hall's Chronicle*, Edward Hall, p592

15 *Calendar of State Papers Relating to English Affairs in the Archives of Venice, Volume 2: 1509-1519*, 944

16 *Ibid.*, 950

17 *Ibid.*, 958.

18 *Ibid.*, 945.

- 19 *Henry VIII: King and Court*, Alison Weir, Random House 2011, p209.
- 20 *Letters and Papers, Foreign and Domestic, Henry VIII, Volume IV*, 4440.
- 21 Ibid., 4542.
- 22 Ibid., 4489.
- 23 Ibid., 4492.
- 24 *On the Special Susceptibility of the Fair-haired Races of Europe for Contracting Sweating Sickness*, Dr Arthur Bourdier, Anthropology Society of Paris Meeting of March 3, 1881, p2.

Treatments and remedies

In August 1517, the papal nuncio, reporting on the sweating sickness epidemic, included the advice given to treat it:

The sweat lasted 24 hours, more or less. During the fit it was fatal to take any cold beverage, or to allow any air to penetrate the garments or bed clothes in which the patient commenced perspiring. It was necessary to have rather more covering than usual, though even in this great caution was needed, as some had been suffocated by a more than requisite amount of covering. The bedchamber should have a moderate fire, so as not to heat the room, but to keep it at a tepid temperature; the arms should be crossed on the patient's breast, and great care be taken lest the least air reach the arm-pits. To neglect these precautions insured immediate death.²⁵

The *Great Chronicle of London* recorded that many people died from lack of good guidance and that they were kept “too hot an [*sic*] close” when they might have been saved “with moderate keeping”. Chronicler John Harding wrote of physicians advising people to lie down in their clothes and bedclothes, to stay in bed for twenty-four hours, to avoid eating meat and to drink as little as possible:

At length, after the great deathe of a many thousand menne, they learned a presente remedye for the same dysease, that is, yf he were sicke of the sweat in the daye, then he should streyle lye downe with his clothes and vestures; yf in the nyghte that he would not ryse for the space of xxiiii houres, and eate not mete at all, yf he could forbare and drink as litel as he myghte.

Polydore Vergil wrote of how survivors of the disease shared how they had beaten it and that the advice included:

- retiring immediately to bed at the first sign of illness
- lying quietly and not moving for exactly twenty-four hours
- adding clothing slowly so that sweating would come “gently and naturally”
- avoiding eating for as long as possible
- drinking luke-warm fluid
- keeping the entire body covered

To avoid the disease, John Caius recommended “a pure and cleane diete” of “temperance”, rather than the usual “excessive diete of Englande”, the consumption of healthy roasted or baked meat, sweet corn bread, certain fish and a “drinke of swete malte and good water”. He advised that wine should be avoided during outbreaks of sweating sickness, but that butter with sage and rue should be taken in the morning as a “good preservative”. Other tips he gave for avoiding the disease included:

- keeping the air as clean and pure as possible by letting fresh air in
- drying moist air by lighting a fire
- sweetening the air with roses, rosemary leaves, bay and cloves steeped in rose water; myrrh, dried rose leaves and frankincense, or juniper berries, could be burned on the fire
- cleaning the house with the nose and mouth protected by a handkerchief “and in your mouth a pece either of setwel, or of the rote of *enula campana* wel steped before in vinegre rosate, a mace, or berie of Juniper”
- keeping clothes clean and sweet smelling
- washing the hands and face with “rose water and vinegre rosate colde” or “faire water and vinegre wherein the pilles or barks of orenge and pomegranates are sodden: or the pilles of pomecitres & sorel is boiled”, to close the pores against the air
- concoctions of various herbs and spices to be taken as medicine, sprinkled on meat or held in the hand or in a handkerchief
- not to fast while the disease was around
- consult a physician when needed and care for your bodies as you would “your hosen or shoes, for the wel making or mending wherof”
- moderate exercise such as hunting, falconry and tennis, and bowling for women

For treating the disease, Caius recommended:

- allowing the body to release the “venom” by sweating
- keeping covered with clothes/bedclothes, but not excessively so
- being looked after by friends or family for the first twenty-four hours to make sure that the patient did not cast off their bedclothes or put out a hand or foot
- avoiding meat for twenty-four hours and drink for the first five hours; after five hours, the patient could be given ale sweetened with sugar
- provoking sweating (if the patient is not sweating the disease out) by gentle rubbing, warm drinks made of “posset ale” and herbs, and lighting a fire in the room
- keeping the patient awake by pulling on his nose or ears until the urge to sleep has passed

If the patient survived to twenty-four hours then he could get up, dress in warm clothes and refresh himself with a “cawdle of an egge” or a little meat. He was advised not to go out of the house for two to three days.

Henry VIII swore by his own medicine recipe which was a concoction of sage of virtue, herb grace, elder leaves and red briar leaves mixed with white wine and ginger.²⁶ In the outbreak of 1528, Brian Tuke passed on the king’s advice to Cardinal Wolsey: “His Highness desireth your Grace to use small suppers, and to drink little wine, namely that is big, and once in the week to use the pills of Rasis. And if it come, in any wise to sweat moderately the full time.” He also advised a posset ale with certain herbs clarified in it.²⁷

²⁵ *Calendar of State Papers Relating to English Affairs in the Archives of Venice, Volume 2: 1509-1519*, 945.

²⁶ ‘Appendix to Preface’, *Letters and Papers, Foreign and Domestic, Henry VIII, Volume 2: 1515-1518*.

²⁷ *Original Letters Illustrative of English History, Vol I*, Henry Ellis, London 1825, p292

Why only the English?

Many of the contemporary sources report the disease only affecting English people and either foreigners being immune to it or catching it mildly. This obviously is not completely true because the disease did spread to the continent in the late 1520s and a similar disease was recorded in the nineteenth century in Europe. However, in 1881 Dr Arthur Boudier presented a paper to the Anthropology Society of Paris in which he argued that the disease did not affect just English people, but that it affected the fair-haired races of Northern Europe, i.e. those who descended from the Anglo-Saxons. He noted that it was those who were descended from the Celts who were spared. It's an interesting theory.

What caused sweating sickness?

Nobody knows for sure what sweating sickness was or what caused it. Theories regarding its identity and cause include arbovirus, Hantavirus Pulmonary Syndrome, relapsing fever, influenza and bad air, dirty houses and a rich diet.

Arthropod Borne Virus, commonly known as an arbovirus

Using 680 extant parish registers from the sixteenth century, Dr A Dyer analysed the demographic impact of the five outbreaks of sweating sickness and concluded that:

- young, rich males seemed to be predisposed to sweating sickness
- the disease was predominantly rural
- there may well have been occurrences outside of 1485, 1508, 1517, 1528 and 1551

Dyer concluded that the fact that it was a summer disease and that it affected predominantly rural communities suggested that sweating sickness was an arthropod-borne virus with a rodent host. However, he also noted that the “very rapid transmission by travellers along the road system is clearly the agency by which the sweat epidemic of 1551 was spread from June onwards”,²⁸ and Tavinor, Thwaites and Gant point out that: “this presents us with aetiological difficulties since arboviruses are only ever transmitted via an arthropod vector – never by human-to-human transmission.”²⁹

Wylie and Collier agree with Dyer’s conclusion, saying that: “the very suddenness of the end of the epidemics lends support to the view that an unidentified rodent reservoir of the virus was susceptible to an epizootic and was killed off, ending a rurally orientated small mammal population explosion that, under favourable environmental circumstances, usually reaches its zenith in August.”³⁰ Wylie and Collier support their theory that sweating sickness was caused by an arbovirus infection with the following points:

- in the fifteenth and sixteenth centuries, England had many wooded areas, which were habitats for wild birds, mammals and mosquitoes
- the majority of arboviruses cause febrile illnesses of varying severity
- men's occupations and recreations take them into wooded areas where they may be bitten by insects carrying the disease
- "The long and irregular intervals between epidemics of sweating sickness accord with the behaviour of certain arbovirus infections."

Wylie and Collier conclude that: "the epidemiological and demographic records of the English sweating sickness, exiguous though they be, are, together with abrupt onset of fever, headache, rapid course, and high mortality as described in the historical accounts, characteristic of some arbovirus infections known to us today."

A viral pulmonary disease such as Hantavirus Pulmonary Syndrome (HPS)

In their article *The English Sweating Sickness, 1485 – 1551: A Viral Pulmonary Disease?*, Taviner, Thwaites and Gant argue that "the causative agent for the sweat was a virus with a marked pulmonary component and few cutaneous signs". They use the symptoms recorded by Thomas Forrestier and John Caius and the absence of "exanthematous [skin eruption] or haemorrhagic signs" to cast doubt on the theory that the disease was an arbovirus as these types of infections are usually characterised by skin eruptions of some kind. They also note that the "rapidity of clinical course" of sweating sickness is also not characteristic of an arbovirus.

Taviner et al also note that Forrestier mentioned breathlessness as a symptom:

[...] but it is on account of the ill-natured, fetid, corrupt, putrid and loathsome vapours close to the region of the heart and of the lungs, whereby they grow ill, and the panting of the breath itself magnifies and increases and restricts: because of the external heat and fire itself near the heart.

And this pulmonary aspect of the disease, combined with the summer preponderance and the rural nature of sweating sickness that point to "a viral infectious agent with a rodent reservoir", have led them to point out the similarities between sweating sickness and

Hantavirus Pulmonary Syndrome (HPS). This syndrome is caused by catching a virus from infected small rodents and has the following symptoms in succession:

- fever
- myalgia
- headache
- rapidly progressive noncardiogenic pulmonary oedema – eighty-eight percent of patients require mechanical ventilation within twenty-four hours of admission to hospital
- death within seventy-two hours – some people survive the disease but all those who die do so within seventy-two hours

Bad air, dirty houses and a rich diet

John Caius concluded that the disease was caused by “close, & unstirred aire [...] out of old welles, holes in the ground [...]” and “impure spirits in bodies corrupt by repletion”, i.e. too much meat in the diet or eating infected fruits, combined with “the evel disposition by constellation”. Caius noted that labourers and “thinne dieted people” either did not catch the disease or only suffered mildly.

Erasmus, in a letter to Francis, physician to the Cardinal of York, wrote of how English houses were not constructed to make a through-draft possible and that their rush floors were unhygienic because sometimes they were not renewed for around twenty years and so they allowed “spittle, vomit, dog’s urine and men’s too, dregs of beer and cast-off bits of fish, and other unspeakable kinds of filth” to fester. Others blamed the damp, foggy English climate and Caius mentioned flooding: “rot in groundes afre great flouddes, in carions, & in dead men”, but these factors are unlikely to have caused such an epidemic.

Relapsing fever

In the past, some have suggested that sweating sickness was actually relapsing fever, which is a disease spread by lice or ticks. Its symptoms include high temperature, chills, headache, joint and muscle ache, and nausea.

Influenza

Some believe it to have been a form of influenza, but influenza was known in the fifteenth and sixteenth centuries, yet sweating sickness was written about as a new and shocking disease.

None of the theories seem to really fit the symptoms and spread of sweating sickness in the sixteenth century. In an article *The Sweating Sickness Returns* in *Discover Magazine*, Gant and Thwaites point out that they could possibly test out their hypothesis (Hanta Virus Pulmonary Syndrome) by exhuming the body of Henry Brandon, Duke of Suffolk, who died from sweating sickness in 1551, but that they have no plans to disturb his grave because the odds of survival of this type of genetic material is very low. It seems that this Tudor killer is set to remain a mystery.

²⁸ *The English sweating sickness of 1551: an epidemic anatomized*, A Dyer, *Medical History*, 1997 July;41(3):362–384

²⁹ *The English Sweating Sickness, 1485 – 1551: A Viral Pulmonary Disease?*, Mark Taviner, Guy Thwaites and Vanya Gant, *Medical History*. January 1998; 42(1): 96–98

³⁰ *The English Sweating Sickness (Sudor Anglicus): A Reappraisal*, John A. H. Wylie and Leslie H. Collier, *J Hist Med Allied Sci* (1981) XXXVI (4): 425–445.

Appendix A

Sweating sickness

in literature and on television

In Hilary Mantel's Man Booker prize-winning novel *Wolf Hall* (2009), Thomas Cromwell loses his wife Liz and his daughters Anne and Grace to sweating sickness. The speed of the disease is vividly depicted. Cromwell bids farewell to Liz in the morning, noticing that the sheets are damp and that she is "warm and flushed", and when he gets home at dusk he is told that she died at 4pm. He didn't even know that she was ill.³¹ His daughters die in a later outbreak, dying within just a few hours of becoming ill. Liz dies in 1527 and the girls in 1529, so actually not during historic epidemics of the disease.

In the novel *The Other Boleyn Girl* (2001), Philippa Gregory's Anne Boleyn falls ill with "the sweat" in 1528, as she did in reality, and the protagonist Mary Boleyn describes the outbreak:

The sweat had come to court with a vengeance. Half a dozen people who had been dancing were in their chambers. One girl had already died, Anne's own maid was sick as a dog in the rooms which she shared with half a dozen others, and while I was waiting for the physician to send some medicines for Anne, I had a message from William telling me not to come near him, but to take a bath with spirit of aloes in the water, for he had the sweat and prayed to God that he had not given it to me.³²

Mary's husband William Carey dies of the disease, but Anne pulls through. This is historically accurate.

In HBO's *The Tudors* series, in season 1 episode 7, we see Cardinal Wolsey and Anne Boleyn suffering from the disease but surviving, and William Compton, one of Henry VIII's good friends, and Henry Fitzroy, the young illegitimate son of Henry VIII, dying of the disease in 1528. William Compton did indeed die, but there is no evidence that Fitzroy ever came down with the disease. In reality, he died at the age of seventeen in 1536, probably from tuberculosis. In the episode, Thomas More talks of the disease being a plague from God, and so prays with his family, and Dr Linacre gives a lecture in front of the king, in which he talks of one of the symptoms of the disease being paranoia and says that people should "observe a good wholesome diet" and exercise to work up a natural sweat.³³ Dr Thomas Linacre, the humanist scholar and physician, actually died in October 1524 and so was not around in 1528 to advise the king on sweating sickness.³⁴

In series 4 of the BBC television series *Merlin*, in the episode *Lamia*, Camelot is struck by an illness that Gaius refers to as sweating sickness. The series, which obviously follows the legend of King Arthur, is set in the late fifth century, 900 years before the first recorded outbreak of sweating sickness.

In the US Syfy Network's *Warehouse 13*, in season 4 episodes 10 and 11, criminally insane Artie uses the Chinese orchid to release the sweating sickness plague. The disease is highly contagious and the symptoms include "chills, rapid pulse, intense thirst, heart pain, and ultimately death".³⁵

³¹ *Wolf Hall*, Hilary Mantel, Picador 2009, p92.

³² *The Other Boleyn Girl* (Movie Tie-In), Philippa Gregory, Touchstone 2008, p300

³³ *The Tudors: The King, the Queen, and the Mistress*, Anne Gracie and Michael Hirst, Gallery Books 2007, p205.

³⁴ *The Tudors on Film and Television*, Sue Parrill, William B. Robison, McFarland 2013, p255.

³⁵ http://warehouse13.wikia.com/wiki/The_Chinese_Orchid

Appendix B

Recipes for Avoiding or Curing Sweating Sickness

The following recipes come from *A Book of Receipts in Letters and Papers, Foreign and Domestic, Henry VIII, Volume 2: 1515-1518*:

For the new sweating sickness which was the 20th year of the reign of King Henry the Eighth.—"Take endive, sowthistle, marygold, m'oney and nightshade, three handfuls of all, and seethe them in conduit water, from a quart to pint, then strain it into a fair vessel, then delay it with a little sugar to put away the tartness, and then drink it when the sweat taketh you, and keep you warm; and by the grace of God ye shall be whole.

For the same.—Take three large spoonfuls of water of dragons, and a quarter of a spoonful of fine treacle of Gean, and half a nutshellfull of unicorn's horn scraped small, and a quarter of a spoonful of fine good powder of maces, and make all that same hot, and so let the patient drink it, and keep him well, neither over hot nor over cold, but whole in his arms and feet, and let him keep him by taking clothes off him by little and little, till he be dried up, and let him use wholesome meats, and by the grace of God he shall not perish. Probatum est of my Lord Darcy and 30 persons in his house all in peril.

Take half an handful of rew, called herbe grace, a handful marygold, half an handful fetherfew, a handful sorrel, a handful burnet, and half a handful dragons, the top in summer, the root in winter; wash them in running water, and put them in an earthen pot, with a pottle of running water, and let them seethe soberly to nigh the half be consumed, and then draw aback the pot, to it be almost cold, and then strain it into a fair glass and keep it close, and use thereof morn and even, and when need is oftener; and if it be bitter, delay it with sugar candy; and if it be taken afore the pimples break forth, there is no doubt but with the grace of Jesu it shall amend any man, woman, or child.

A medicine for the pestilence, sent to my Lord Darcy from the Menery, from my Lady Whethyll.—My Lord, in my best manner I recommend me unto your Lordship, and very sorry I am of your great heaviness. My Lord, the cause of my writing to you at this time is to advertise your Lordship of a proved medicine; that is, to take treacle and vinegar, and temper them together, and put thereto some running water to allay the vinegar with, and take

three or four good spoonfuls fasting, you and all yours, four or five mornings, and fast an hour after it, and by the grace of God ye shall find it shall do great good; and then my good Lord, I beseech our Lord to preserve you and all yours, and send you as good health as I woll myself. This medicine have I proved myself. Item, the said Lord used at all times of necessity for to take powder of imperial treacle of Gean, vinegar, spring water, and powder of unicorn's horns, timely fasting, and neither to drink nor eat to noon; this is proved for a good preparatif.

By Dr. Cromer [court physician], proved with Katharine Constable.—[Recipe] oleum Ros'an popelionis, et [ounce]1 mellis dispumati, 3½ aquæ plantag. et ros'rum parte unam must'; fiat unguentum et cum pluma columbina tingatur locus delence.

Note: My Latin is not very good but this appears to be made from plantago water, clarified honey and some type of oil (perhaps rose oil) which is then mixed and placed next to a dove feather.

Henry VIII's own recipe:

Take a handful of sawge of vertue, a handful of herbe grace, a handful of elder leaves, and a handful of red briar leaves, and stamp them together, and strain them in a fair cloth with a quart of white wine, and then take a quantity of ginger, and mingle them all together, and drink of that medicine a spoonful every day, nine days together, and after nine days ye shall be whole, for the whole year, by the grace of God. And if it fortune that one be sore taken with the plague before he hath drunk of the same medicine, let him take the water of scabies, and a spoonful of betony water, and a quart of fine treacle, and put them all together, and cause the person to drink it, and it shall put out all the venom; and if it fortune that the botch do appear, then take of leaves of briars, elder, and mustard seed, and stamp them all together, and make a plaster thereof, and lay it to the sore, and it shall draw out all the venom, and the person shall be whole.

A proved medicine against the pestilence, called the philosopher's egg.—Take first an egg and break an hole in one end thereof, and do out the white from the yolk as clean as you can; then take whole saffron and fill the shell therewith by the yolk, then close it at both ends with two half egg shells; then rake it in the embers till it be so hard that you may stamp it to fine powder in a mortar, shell and all; then take as much white mustard seed as the weight of the egg and saffron is and grind it as small as meal; then take the 4th part of an oz. of a dittony root, and as much of turmontell and of crownutes one dram; stamp this three sundry times very fine in a mortar, and then mix them three well

together; after that take as a thing most needful the root of angelica and pimperl, of each one drachm, and make them to powder and mix them with the rest; then compound herewith 4 or 5 grains a quantity of unicorn's horn if it be possible to be gotten, and take so much weight as all these powders come to of fine treacle, and stamp the same with the powders in a mortar, till they be all mixed and hang to the pestle, and then it is perfectly made; put this electuary in glass boxes, and you may keep it 20 or 30 years; the longer the better.

How this electuary is to be used, and of the ordering of the patient. Item, when the patient is infected of the pestilence, let him take as soon as he can this electuary or ever it infect the heart: a crown weight of gold, and as much of some treacle, if it be for a man, but if it be for a woman, let them take less, and that must be well broken together. And if the pestilence come with cold, then give him the said electuary with half a cruse of white wine, tempered together; but if it come with heat, then give it him with plantony water, or with well water and vinegar mixt together; and when he hath drunk the same let the patient go to his naked bed, and cover him warm, and let him lie 6, 8, or 10 hours as he is able to endure it, for to sweat, for the more he sweateth the better, for the sickness vadeth with the sweat; but if you cannot sweat, then heat two or three bricks or tiles in the fire and warm (sic) them in a moist linen cloth, and lay them by his sides in the bed, and that shall cause him to sweat; and remember, as the patient sweateth, to wipe away the sweat from his body downward with hot dry cloths, and his sweating being ended you must shift his shirt and all the bedding with fresh warm clothes, using him very warm from any cold taking in the meantime, and let him sit well wrapped by a warm fire while his bed is preparing to be made.

How the patient shall behave himself when he hath ended his sweating.—Let the keeper of the sick beware of the breath of the patient in his sweat; also let the clothes be well aired and washed; and because he shall be faint and distempered after his sickness, he shall eat no flesh nor drink wine for the space of one week, but let him use this comfortness for the heart;—as conserve of bugloss or red roses, and specially he shall drink three or four days after he hath sweat, morning and evening, three quints of the juice of sorrel, with one oz. of conserve of sorrel, mixed together, and so forth, with all besides that is comfortable for the heart. Also, if one take the quantity of a bean of the said electuary, with some good wine, it shall keep him from the infection of the pestilence.

The order to make the water.—Take rue, egremony, wormwood,

salendine, sage, balm, rosemary, mugwort, dragons, pimpernel, marigolds, fetherfew, burnet, sorrel, and a little roots of elecampane, scraped and shred small, and mince all the herbs small, and as much more rosemary as of any of the other herbs, and you must have them of the like weight; then soak them in the best white wine you can get, three days and three nights, and after wring out the wine from the herbs, and still the herbs by themselves, and after still the wine, and that water is good for agues; but put it not to the water of the herbs, for that water with a little treacle or metridatum shall drive any sickness from the heart.

As through the default “of good ruling and dieting in meat and drink, men fallen often into this sickness, therefore when the pestilence reigneth in country, the man that wol be kept fro that evil, him needeth him to keep fro outrage and excess in meat and eke drink, ne use no baths, ne sweat not too much, for all these openeth the pores of the body, and maketh the venomous airs to enter, and destroyeth the lively spirits in man, and enfeebleth the body; and sovereignly haunting of lechery, for that enfeebleth the kind, and openeth the pores that wicked airs may enter. Also, use little or nought of these: garlick, onions, leeks, or other such meats that bring a man into an unkindly heat. Also, suffer not greatly thirst that time, and if thou thirst greatly look thou drink but measurably to slake thy thirst; and the best drink were cold water, mended with vinegar or tysan.” The poison enters at the pores in one of the “cleansing places” of the principal members, i.e. heart, liver, and brain; and unless the patient is bled within 18 hours, it fastens on one place, and casts him into an ague, and maketh a botch in some of the three cleansing places, or near them. “Pricking or flakering of blood” is a sign of the sickness. “If the matter be guided under the armhole, it cometh of the heart, and then bleed on the vein that is called the cardiac, and on the same side that the evil is in.” If between the thighs and the body, bleed on the foot, or between the ancle or the heel; or else “be thou ventused on the thighs with a box beside the botch.” If it appear in the head or arms, bleed on the vena cephalica in the same arm; or else above the hand between the thumb and next finger; “or else be thou ventused between the shoulders with boxes till the blood be drawn out.” The heart should be comforted with cold electuaries, to temper the great heat thereof. Water should be stilled from dittany, scabiose, pimpernel, and tormentil. He should not eat much flesh, but chickens sodden with water, or fresh fish roasted to eat with vinegar. Pottage of almonds is good, and for drink tysan, or in the heat small ale. If he wishes wine,

give him vinegar and water; white wine is better than red. A powder of the above herbs with bole armeniac and terra sigillata should be taken in the drink.

After a prescription for a drink of herbs.—Another for them that are clerks for to say hit every day with a crosse on the forhed. Per signum tau T. A peste et fame libera nos Jesu. Hic est titulus triumphans, Jesus Nazareus Rex Judæorum. Christus venit in pace, et Deus homo factus est Jesus. In nomine Patris et Filii et Spiritus Sancti. Amen.

Another very true medicine.—For to say every day at seven parts of your body, 7 paternosters, and 7 Ave Marias, with 1 credo at the last. Ye shal begyn at the ryght syde, under the ryght ere, saying the ‘paternoster qui es in coelis, sanctificetur nomen tuum,’ with a cross made there with your thumb, and so say the paternoster full complete, and 1 Ave Maria, and then under the left ear, and then under the left armhole, and then under the left the (thigh ?) hole, and then the last at the heart, with 1 paternoster, Ave Maria, with 1 credo; and these thus said daily, with the grace of God is there no manner drede hym. Quod pro certo probatum est cotidie.

A special medycyn for the pestilence.—In primis, 1 hanfull off marigollen, 1 hanfull off fetherfew, and halffe a hanfull off rewe, and 1 hanfull of burno, a quantyte off dragons off the lewys or the mores, and 1 hanfull off sorrel; and thake alle these erbys toghether, and whasche them in rynnyng whater, and than take a potell off runnyng whater, and sethe the all your erbys in the pottell of water, tylle hyt be sodyn to a quarte, and soo take hit the syke blode warme.”

Bibliography

Primary Sources

- A Book of Receipts, Letters and Papers, Foreign and Domestic, Henry VIII, Volume 2: 1515-1518*
- André, Bernard. *Annals of Henry VII*
- 'Appendix to Preface', *Letters and Papers, Foreign and Domestic, Henry VIII, Volume 2: 1515-1518*.
- Caius, John. *A boke or counseill against the disease commonly called the sweate or sweatyng sicknesse*, 1552
- Calendar of State Papers Relating to English Affairs in the Archives of Venice, Volume 2: 1509-1519*
- Forestier, Thomas. *Tractatus contra pestilentiam thenasmonem et dissinteriam*, Rouen, 1490
- Hall, Edward. *Hall's Chronicle*. London, 1809
- ed. Lethbridge, Charles. *Chronicles of London*, Kingsford, Oxford, 1905
- Letters and Papers, Foreign and Domestic, Henry VIII, Volume 4*
- Original Letters Illustrative of English History, Vol I*, Henry Ellis, London, 1825
- ed. Raine, Angelo. *York Civic Records. Vol.1*. Yorkshire Archaeological Society, 1939.
- The Croyland Chronicle: Part IX, The Third Continuation of the History of Croyland Abbey: July, 1485 – April, 1486 with Notes*, <http://www.r3.org/on-line-library-text-essays/crowland-chronicle/>
- Vergil, Polydore. *Anglica Historica, 1485-1537*, ed. Denys Hay, Camden Society, XLIV, London, 1950

Secondary Sources

- Bourdier, Arthur. *On the Special Susceptibility of the Fair-haired Races of Europe for Contracting Sweating Sickness*. Anthropology Society of Paris Meeting of March 3, 1881
- Creighton, Charles. *A History of Epidemics in Britain, Volume I*. Cambridge University Press, 1981
- Dyer, A. *The English sweating sickness of 1551: an epidemic anatomized*. Medical History, 1997 July;41(3):362–384
- Gracie, Anne and Hirst, Michael. *The Tudors: The King, the Queen, and the Mistress*. Gallery Books, 2007
- Gregory, Philippa. *The Other Boleyn Girl (Movie Tie-In)*. Touchstone, 2008
- Gottfried, R.S. *Population, plague and the sweating sickness: demographic movements in late fifteenth century England*, J. Brit. Stud., 1977

- Hemingway, Joseph. *History of the city of Chester, from its foundation to the present time*, Vol. I. Chester, 1831
- Mantel, Hilary. *Wolf Hall*. Picador, 2009
- Morens, David M. et al. Pandemic Influenza's 500th Anniversary, *Clinical Infectious Diseases* (Oxford Journals), Volume 51, Issue 12, 2010
- Parrill, Sue and Robison, William B. *The Tudors on Film and Television*. McFarland, 2013
- Taviner, Mark; Thwaites, Guy and Gant, Vanya. *The English Sweating Sickness, 1485 – 1551: A Viral Pulmonary Disease?*. Medical History. January 1998; 42(1): 96–98
- http://warehouse13.wikia.com/wiki/The_Chinese_Orchid
- Weir, Alison. *Henry VIII: King and Court*. Random House, 2011
- Wylie, John A. H. and Collier, Leslie H. *The English Sweating Sickness (Sudor Anglicus): A Reappraisal*, J Hist Med Allied Sci (1981) XXXVI (4)

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